VIDEO COMMENTARY

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Facts Views Vis Obgyn

Da Vinci Single-Port surgery in an obese woman affected by endometrial cancer

Benedetta Alberghetti[1], Elena Casetta [1], Antonell Biscione[1], Filippo M. Capomacchia[1], James M. Hughes[2], Riccardo Ponzone[3], Riccardo Oliva[4], Francesco Fanfani[5,6], Giovanni Scambia[5,6], Luigi C. Turco[1]

[1]Ovarian Cancer Center, Candiolo Cancer Institute, FPO-IRCCS, Torino, Italy
[2]Candiolo Cancer Institute, FPO-IRCCS, Torino, Italy
[3] Department of Gynecology Oncology, Candiolo Cancer Institute, FPO-IRCCS, Torino, Italy
[4]Università Cattolica del Sacro Cuore, Institute of Obstetrics and Gynecology, Rome, Italy
[5]Department of Woman, Child and Public Health, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy
[6]Università Cattolica del Sacro Cuore, Institute of Obstetrics and Gynecology, Rome, Italy

ABSTRACT

Background: Minimally invasive surgery in obese patients is advantageous in terms of postoperative recovery and estimated blood loss. In literature several retrospective studies comparing robot-assisted and laparoscopic surgery are present, while a randomised case-control study will better define the advantages prospectively.

Objectives: Here we present the video of the surgical radical management for endometrial cancer in an obese woman using the Da Vinci Single-Port (SP) robotic platform.

Participant: A 66-year-old woman with a body mass index (BMI) of 44 kg/m² and hypertension, diagnosed with grade 1 endometrioid endometrial cancer.

Intervention: The patient underwent a SP Robotic assisted radical class A hysterectomy (as per the Querleu-Morrow classification), bilateral salpingo-oophorectomy and sentinel lymph-node biopsy. A 2.7 cm umbilical incision was performed, and the single port robotic trocar was easily positioned. A uterine manipulator was not employed; traction was achieved using vaginal valves. Due to her constitution, a pneumoperitoneum with an intra-abdominal pressure greater than 8 mmHg and a Trendelenburg inclination greater than 19° could not be achieved.

Results: Docking time was 8 minutes, the console time was 84 minutes, and the total operation time was 128 minutes. The estimated blood loss was 200 mL. The pain scores were irrelevant. The duration of hospitalisation was 2 days. No perioperative early complications were recorded. The aesthetic result was good.

Conclusions: To our knowledge, this is the first Da Vinci SP endometrial cancer treatment in an obese woman presented in a step-by-step video. Robotic surgeries were successfully performed, the triangulation of the instrument allowed for comfortable surgery. Therefore, this surgical system may also be applicable to patients with a high BMI; however, further studies are required to confirm these preliminary findings.

What is New? Minimally invasive surgery offers important benefits in terms of recovery, pain control, and reduced blood loss; however, its application in obese patients often remains challenging. The technical limitations imposed by body habitus—restricted working space, limited Trendelenburg positioning, and difficulties in trocar placement—can compromise both surgical exposure and oncologic radicality. In this context, the introduction of the Da Vinci SP robotic platform may represent a meaningful evolution in the management of this increasingly common patient population. The flexibility of the multi-jointed SP instruments and the ergonomic advantages of robotic control allow surgeons to overcome the typical restrictions encountered in this population.

Corresponding Author: Benedetta Alberghetti, MD, Ovarian Cancer Center, Candiolo Cancer Institute, FPO-IRCCS, Torino, Italy
E-mail: benedetta.alberghetti@ircc.it **ORCID ID:** orcid.org/0009-0002-6940-7522
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ABSTRACT

We believe that this report highlights an important step toward expanding the accessibility of minimally invasive radical surgery to all patients, regardless of BMI. The SP robotic approach combines surgical radicality, patient safety, and reduced invasiveness, suggesting a new paradigm for treating endometrial cancer in obese women.

Keywords: Endometrial cancer, hysterectomy, laparoscopic surgery, pain, robotic-assisted, robotic surgery

Video 1. Minimally invasive surgery is currently the gold standard in the treatment of most gynaecological pathologies,[1,2] both benign and oncological. In particular, robotic surgery offers us greater surgical precision and allows us to treat patients with high body mass indexes (BMIs) that would be more complex with laparotomic or laparoscopic approach.[3,4,5] In this article we report step by step the surgical treatment using Da Vinci Single Port platform for endometrial carcinoma in a patient with severe obesity for which there were important limitations in terms of the need for Trendelemburg reduction and the use of low pneumoperitoneum pressure. We report the timing of each surgical step and the clinical outcomes of this case. It's conceivable this new surgical system could be applied also in patients with high BMI.

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Video 1. Da Vinci single-port surgery in an obese woman affected by endometrial cancer: https://youtu.be/P3ZK26Lgs0k